

**AMENDMENTS TO THE SPECIFICATION**

**NE** • Please replace the present title with the following rewritten title:

~~IMPROVEMENTS IN OR RELATING TO CONTROL AND/OR MONITORING  
SYSTEMS~~

ACCESS CONTROL DEVICE WITH ELECTRONIC IDENTIFICATION AND  
AUDIO COMMUNICATION CAPABILITY

**Page 1, paragraph 4:**

**B1** There is often a need to control access to a door or building by using an access control system that uses electronic means such as a token, badge or card to identify persons allowed access. Sometimes the means of electronic identification is a PIN number that a person is required to enter via a keyboard. Usually, with the appropriate identification is received, access is automatically granted.

**Page 1, paragraph 6, which bridges over to page 2:**

**B2** There a number of situations whereby the wrong identification is received, or no identification means is received at all. For example, a person may enter in the wrong PIN number, have an out of date identification device, may not have the identification device with them or may not have been issued provided with such a device in the first place.

**Page 2, paragraph 1:**

**B3** In the above circumstances, it is desirable for that person to have audio communication with an operator of the security system. That operator can then determine whether access can be granted and subsequently either allow or ~~to~~ deny that person access. This audio communication is typically supplied by a separate intercom device which usually is manufactured by a separate manufacturer ~~to that~~ from one who would normally manufacture the card reader.

**Page 2, paragraph 3:**

B4 As these devices are from separate manufacturers, there is no consistency in the data format. Thus, the devices do not normally share in the data between them and two separate communication networks are required to be run from the devices to the main security system.

**Page 2, paragraph 5:**

B5 Further, it is not possible to have any interactions between the devices. E.g. For example, someone swiping their card does not have immediate access to intercom functions.

**Page 2, paragraph 6:**

B4 It can be seen that having separate devices means they are expensive to install and maintain because of the double up the reproduction of components and cabling.

**Page 2, paragraph 7:**

B7 Thus it is the object of the present invention to address the above problems, or at least to provide the public with the use of a useful choice.

**Page 3, after paragraph 1, please replace with the following:**

NE  
DISCLOSURE OF THE PREFERRED EMBODIMENTS SUMMARY OF THE INVENTION

**Page 3, paragraph 1:**

B8 According to one aspect of the present invention there is provided an access control device including an electronic identification means, characterised in that the access control device also includes an audio communications device.

**Page 3, after paragraph 3, please insert the following:**

**DESCRIPTION OF THE PREFERRED EMBODIMENTS**

B9 A basic system configuration of a control monitoring system to which the present invention applies is illustrated in the figure. The system includes a command center 40 that comprises a Server 40a and at least one work station 41. The server is coupled to a t least one access

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B11  
controller 42 via an ethernet connection. The access controller has bi-directional links via a high speed RS 485 network to a plurality of peripherals, including field devices 48 that couple to magnetic step reading 43 or proximity reader 44.

The RS 485 network also couples an output panel 45, a DUC 46 or an intercom 47 to the access controller 42. An output panel 45, also connects to the network.

Page 3, paragraph 4

B10  
Reference throughout the specification should now be made to the access control device 43, 44, 45, 46, 47, 48 as being a 'plus reader'. It should be appreciated that this term is used for reference only and should not be seen as limiting.

Page 3, paragraph 5

B11  
The electronic identification means may come in a number of forms and may include a single component or a number of different components. For example, the electronic identification means may be a card reader 43/41. This may be in the form of a swipe card device 43, or perhaps in some embodiments a proximity smart card reader 44/48.

Page 4, paragraph 1

B12  
The electronic identification means may include a key pad 44A ~~into which~~ by means of which alpha/numeric or some other form of data can be entered. This may be in addition to or instead of a card reader.

Page 4, paragraph 3:

B13  
Other embodiments of the present invention may have the electronic identification means remotely sense some physical attribute of the person wishing to gain access. For example, it may use a fingerprint or retina scan or other biometric devices.

Page 4, paragraph 4

B14  
~~Further~~ In further embodiments of the present invention the audio communications device would be in the form of an intercom 47 and ~~should now~~ will be referred to as such throughout the specification. Again this term should not be seen in any way as limiting.

**Page 4, paragraph 5**

B15 Preferably, the person situated by the plus reader can press a function key to operate the intercom 47 and communicate with the operator of the security system.

**Page 4, paragraph 6**

B16 Preferably also, the operator can communicate back through the intercom 47.

**Page 4, paragraph 7:**

B17 In some embodiments of the present invention the operator can choose when to turn on the intercom 47. For example, in the area close to the plus reader there may be evidence ~~on~~ of an alarm or duress situation such as screaming. The operator can then turn on the intercom and listen to this sound.

**Page 5, paragraph 1**

B18 The intercom 47 may also be able to provide other audio services. For example, an intercom may play pre-stored audio clips to the user. For example, the user may swipe the card and the security system may determine that there is a message waiting for that particular user. This message may be retrieved from whatever storage system in which it is kept and played for the user.

**Page 5, paragraph 2**

B19 The intercom 47 may also be able to play emergency evacuation audio clips. For example, 'Fire, please exit immediately through exit door'.

**Page 5, paragraph 4:**

B20 The intercom 47 may also be used as part of the a company paging system. ~~It can also be used to provide voice prompts for operations and disability situations.~~

**Page 5, paragraph 5:**

B21 While the data from the intercom 47 may be in any suitable format that can be used in any security system, it is preferably in digital format. This allows for easier integration with other data received through the security system and other peripheral devices and ~~with~~ for interaction with the electronic identification means. The digital data is also easier to store and process.

**Page 6, paragraph 1:**

B22 It is envisaged that the person at the card reader will generate an event or signal when pressing a designated function key on the reader that includes the intercom. This event or signal may be recorded by the security system and as well as alerting the operator of the security system. While the operator is talking ~~to~~ into or listening to the intercom the conversation may be optionally recorded to the operator's workstation or elsewhere.

**Page 6, paragraph 3**

B23 Data from the intercom 47 and the card reader 43/44 can be indexed to data received from other peripherals such as video cameras 46.

**Page 6, paragraph 4:**

B24 It should be appreciated that a number of technical issues ~~needed~~ need to be overcome to ensure that the communications system and the plus reader can handle the different data needs of the systems.

**Page 6, paragraph 5:**

B25 For example, a typical card reader only requires communications bandwidth of maybe 40K bits per second to perform normal access control functionality. However, to handle the communications from the intercom 47 and other peripheral devices such as a camera 46, the communications systems need at least four times that bandwidth. For example, in one particular embodiment of the present invention, the bandwidth of 187.5K bps is required.

**Page 7, paragraph 1:**

B26 The human ear is very sensitive to sound quality. It should also be appreciated that in the security system, sound quality is paramount, not only in communicating instructions, but also with recorded sound happening around an 'event'. Audio dropouts or loss in security systems is something to be avoided.

**Page 7, paragraph 2**

B27 Thus, the applicants have in preferred embodiments of the invention designed a system that guarantees to poll each of plus readers 42 at a minimum of 10 times per second. This gives the audio quality desired.

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**Page 7, paragraph 4**

B28 The incorporation of a ~~a~~-an electronic identification such as a card reader 43/44 along with an audio communications device such as an intercom 47 provides cost savings and several improvements of functionality.

**Page 8, paragraph 3**

B29 With the embodiment of the present invention which uses digital intercom, data can be readily processed with digital data coming in from other peripheral devices such as video cameras 46.